

# External Cephalic Version After Rupture of Membranes in Early Labor

Christian S. Sunoo MD\* and Eesha R. Bhattacharyya MD\*\*



Christian S. Sunoo MD



Eesha R. Bhattacharyya MD

## Abstract

**Background:** Breech presentation occurs in approximately 4% of term pregnancies. Recently the American College of Obstetrics and Gynecology has suggested that cesarean section is the safest option if the fetus remains in breech position. As an alternative to cesarean section, external cephalic version has been used prior to labor and even recently in the patient with rupture of membranes not in labor. We present two cases found at our institution from 1990 through 2001, who at term presented in early labor with spontaneous rupture of membranes and underwent successful external cephalic version.

**Case:** Two women presented to labor and delivery with spontaneous rupture of membranes and were found to be in early labor with cervical dilatation. Both underwent successful external cephalic version. As labor progressed, each ultimately underwent cesarean section to accomplish delivery. One patient underwent cesarean section for failure to progress and the other for severe variable decelerations associated with an umbilical cord prolapse.

**Conclusion:** External cephalic version is possible in the term pregnancy with ruptured membranes and in early labor, but the patient remains susceptible to complications of version and labor.

## Introduction

Breech presentation occurs in approximately 4% of term pregnancies.<sup>1</sup> Recently the American College of Obstetrics and Gynecology has suggested that cesarean section is the safest option if the fetus remains in the breech position.<sup>2</sup> As an alternative to cesarean section, external cephalic version has been used prior to labor and even recently in the patient with rupture of membranes not in labor.<sup>3,4</sup> We present two patients who presented at term with spontaneous rupture of membranes in early labor and underwent successful external cephalic version.

## Case #1

In 1990, a 35 year old woman, gravida 3, para 1, abortion 1, presented to labor and delivery at 38 weeks gestation with uterine contractions and a history of leaking clear fluid from the vagina. Rupture of membranes was documented by ferning on microscopy. Cervical exam 3 hours after rupture of membranes was 2 centimeters, 50% effaced, and the feet were felt floating high. Uterine contractions were every 2-5

minutes lasting 40 seconds. Amniotic fluid volume was not documented. At 3.5 hours after rupture of membranes, an external cephalic version was successfully performed and pitocin started to augment labor. The patient's cervix reached 4 cm, 80% effacement, -1 station. Her exam remained the same for more than 2.5 hours despite adequate uterine contraction forces so she underwent a low transverse cesarean section to deliver an infant weighing 2365 grams with apgars of 8 and 9. The patient's postoperative course was complicated by endometritis treated successfully with intravenous antibiotics. She was discharged on postoperative day 5.

## Case #2

In 1999, a 38 year old, gravida 2 para 1 woman presented to labor and delivery at 37 weeks gestation with uterine contractions and a history of leaking clear fluid from the vagina. Rupture of membranes was documented by speculum exam and a digital exam of 1-2 centimeters, 30% effacement and ballotable presentation was documented. Uterine contractions were every 4 to 6 minutes lasting 90 to 100 seconds. The amniotic fluid volume was not documented. The patient was consented and underwent successful external cephalic version 1 hour and 20 minutes after rupture of membranes. The patient was noted to have variable decelerations that were not relieved by amnioinfusion. The variables worsened and a cervical exam revealed a prolapsed umbilical cord. The patient underwent a low transverse cesarean section approximately 8 hours after rupture of membranes. The baby weighed 2580 grams with apgars of 2 and 8. The patient was discharged home on postoperative day 4.

## Comment

Recently, the nation in an attempt to decrease medical costs has studied ways to decrease one of the most common surgical procedures performed in the United States, cesarean section. There was a trend towards doing more vaginal births after cesarean, whose benefit has now been questioned.<sup>5,6</sup> There was a trend to do vaginal breech deliveries in qualified patients, which

*Continues on p. 293*

## Authors:

\*Department of Obstetrics and Gynecology, Kaiser Permanente Medical Group, Honolulu, HI  
\*\*Koolau Women's Health Care, Inc.

Correspondence to:  
Christian S. Sunoo MD  
1010 Pensacola St.  
Honolulu, HI 96814  
Ph: (808) 432-2564  
christian.s.sunoo@kp.org

has now reversed courses as swayed by the current American College recommendations.<sup>2</sup> The two remaining hopes for reducing our cesarean section rates are active management of labor and external cephalic version for breech presentations.

As complications can occur during an external cephalic version, it is prudent to do this procedure in a medical setting in which an emergency cesarean section can be accomplished.

A MEDLINE search from 1966 to May Week 2 2002, using "version" and "membrane rupture, rupture, ROM, and PROM" found four papers. Furguson and Dyson successfully performed external cephalic version on 11/15 patients who were in labor. Ten of these went on to deliver vaginally. They were uniformly unsuccessful in completing external cephalic version in 7 patients with rupture of membranes. These patients were not included in their report.<sup>7</sup> Both Drexler and Brost were successful, but in the pre-term fetuses with spontaneous rupture of membranes and not in labor.<sup>3,4</sup> Patients with intact membranes who were successfully turned have a higher cesarean section rate than matched controls.<sup>8</sup> Our cases of external cephalic version in the term patient with spontaneous rupture of membranes and in labor, demonstrate that while successful version is possible, the patient is exposed first to the risk of version and then all of the risks associated with labor and delivery which may still result in a cesarean section.

#### References

1. Ventura SJ, Martin JA, Curtin SC, Mathews TJ. Births: final data for 1997. Natl Vital Stat Rep 1999;47(18):1-96 (Level II-3)
2. American College of Obstetricians and Gynecologists. Mode of Term Singleton Breech Delivery. ACOG Committee Opinion. Number 265. Washington DC: American College of Obstetricians and Gynecologists, 2001.
3. Brost CB, Adams JD, Hester MH. External cephalic version after rupture of membranes. Obstet Gynecol 2000; 95: 1041.
4. Drexler B, David VA, Newman LA. External cephalic version with ruptured membranes and adequate amniotic fluid volume. Am J Perinatol 1991;8:220-221.
5. McMahon MJ, Luther ER, Bowes WA Jr, Olshan AF. Comparison of a trial of labor with an elective second cesarean section. N Engl J Med 1996;335:689-695.
6. Yetman TJ, Nolan TE. Vaginal birth after cesarean section: a reappraisal of risk. Am J Obstet Gynecol 1989;161:1119-1123.
7. Ferguson JE, Dyson DC. Intrapartum external cephalic version. Amer J Obstet Gynecol 1986;152:287-298.
8. Lau TK, Lo KW, Wan D, Rogers MS. The implementation of external cephalic version at singleton breech presentation—How can we further increase its impact? Aust N Z J Obstet Gynecol 1997;37:393-396.



*There is a time  
in life when we start  
to understand  
what really  
matters.*

Helping people with  
terminal illness, their  
families and loved  
ones live every day at  
home.

**924-9255**

[www.hospicehawaii.org](http://www.hospicehawaii.org)



**HOSPICE HAWAII**

## Classified Notices

To place a classified notice:

HMA members.—Please send a signed and type-written ad to the HMA office. As a benefit of membership, HMA members may place a complimentary one-time classified ad in HMJ as space is available.

Nonmembers.—Please call 536-7702 for a non-member form. Rates are \$1.50 a word with a minimum of 20 words or \$30. Not commissionable. Payment must accompany written order.

### Office Equipment

**OFFICE EQUIPMENT**— BICYCLE ERGOMETER/EKG CARDIOLINE \$4000. Bronchoscope, Fujitsu \$4000. Inquiries by e-mail at [d\\_kosie@yahoo.com.au](mailto:d_kosie@yahoo.com.au).

### Seeking Position

**ANESTHESIOLOGIST**— LOOKING FOR POSITION. Special interest Pain Management. 25 years experience in Family Medicine. 5 years experience in Anesthesiology. PT/FT. Inquiries by e-mail at [d\\_kosie@yahoo.com.au](mailto:d_kosie@yahoo.com.au).

## UROLOGY Locum Tenens

- Board Certified
- Available 1/3/2004
- Hawaii License MD-8442
- Hawaii Experience
- 26 Years Private Practice
- 15 years Clinical Instructor

#### Experience in:

- ESWL
- Ureteroscopy
- Brachytherapy
- TRUS
- Thermotherapy

**Harry W. Smith M.D., F.A.C.S.**

**410-404-4635**

[harrysmithmd@yahoo.com](mailto:harrysmithmd@yahoo.com)